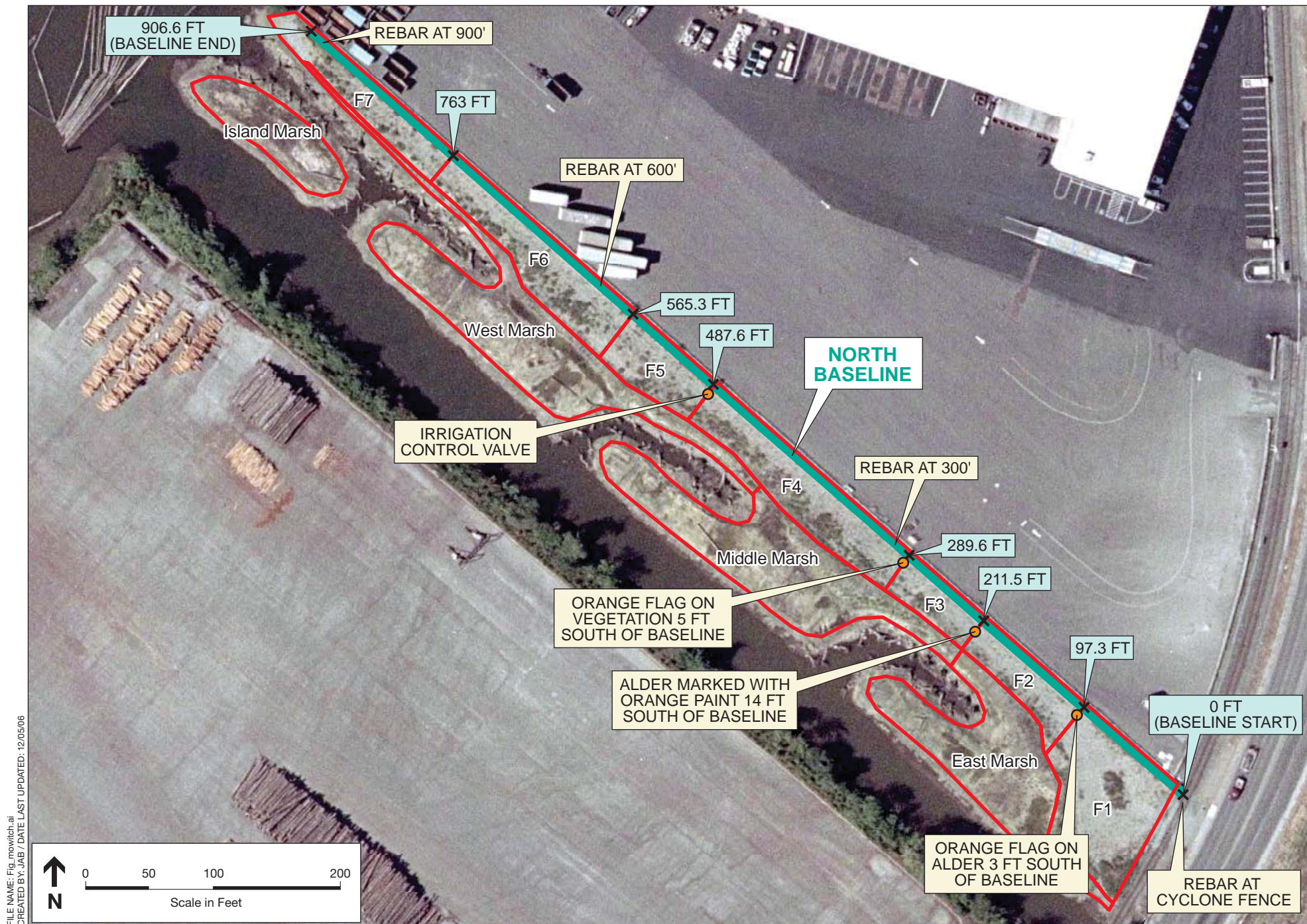


Mowitch Management Zones and Riparian Transects



SOURCE: NOAA Restoration Center (Paul Cereghino), 2006.

Commencement Bay Habitat Restoration . 99013
Mowitch Riparian Baseline and Management Zones, 2006
Tacoma, Washington

Riparian Baseline Location Information, Mowitch

NORTH BASELINE (total length: 906.6 ft)	
General location: Runs roughly east to west along north side of riparian area.	
<i>Distance along baseline</i>	<i>Landmarks</i>
0 ft (start – east end of baseline)	Installed rebar with orange cap and painted a rock orange near existing cyclone fence.
7.3 ft	First wood fence post.
50 ft	Painted orange mark on fence during 2006 site visit.
97.3 ft	Boundary between management zones F1 and F2 painted on fence. Tied orange flag to alder located 3 ft south of baseline during 2006 site visit.
150 ft	Painted orange mark on fence during 2006 site visit.
211.5 ft	Boundary between management zones F2 and F3 painted on fence. Marked alder located approx. 14 ft south of baseline with orange paint during 2006 site visit.
250 ft	Painted orange mark on fence during 2006 site visit.
289.6 ft	Boundary between management zones F3 and F4 painted on fence. Tied orange flag to vegetation approx. 5 ft south of baseline during 2006 site visit.
300 ft	Painted orange mark on fence during 2006 site visit. Installed rebar with orange cap next to fence.
350 ft	Painted orange mark on fence during 2006 site visit.
400 ft	Painted orange mark on fence during 2006 site visit.
450 ft	Painted orange mark on fence during 2006 site visit.
487.6 ft	Boundary between management zones F4 and F5 painted on fence. Existing irrigation control valve in ground located near baseline.
550 ft	Painted orange mark on fence during 2006 site visit.
565.3 ft	Boundary between management zones F5 and F6 painted on fence.
600 ft	Painted orange mark on fence during 2006 site visit. Installed rebar with orange cap next to fence.
650 ft	Painted orange mark on fence during 2006 site visit.
763 ft	Boundary between management zones F6 and F7 painted on fence.
800 ft	Painted orange mark on fence during 2006 site visit.
850 ft	Painted orange mark on fence during 2006 site visit.
900 ft	Painted orange mark on fence during 2006 site visit. Installed rebar with orange cap next to fence.
906.6 ft (end – west end of baseline)	End of fence.
Comments:	Run transect tape along south edge of square wood fence posts.



Rebar and fence at beginning of North Baseline, Mowitch (9-1-06).



Looking west from beginning of North Baseline, Mowitch (9-1-06).



Looking east along North Baseline at approx. 600 ft, Mowitch (9-1-06).



Looking east from end of North Baseline, Mowitch (9-1-06).

Mowitch Riparian Line Intercept Transect Locations

Total number line intercept transects: 24

Management Zone	Baseline Code	Line Intercept Transect Code	Distance along Baseline (ft)	Distance along Offset (ft)
F1	North	F1-1	3	25
		F1-2	7	44 ^a
		F1-3	14	6
		F1-4	31	37
F2	North	F2-1	113	12
		F2-2	126	29
		F2-3	137	8
F3	North	F3-1	227	5
		F3-2	220 ^b	7
		F3-3	211	26 ^c
F4	North	F4-1	333	14
		F4-2	360	5
		F4-3	375	23 ^d
		F4-4	376	12 ^e
F5	North	F5-1	494	14
		F5-2	494	31 ^f
		F5-3	503	18 ^g
F6	North	F6-1	566	6
		F6-2	577	26
		F6-3	615	21
		F6-4	653	4
F7	North	F7-1	782	19 ^h
		F7-2	811	10 ^h
		F7-3	815	6 ^h

^a Random offset distance selected for Transect F1-2 in the office was found to be south of the southern edge of riparian vegetation (i.e., within the marsh) when measured in the field. Offset distance was moved 17 feet north to the final offset location of 44 feet in order to keep Transect F1-2 within the edge of the riparian area.

^b Boundary between management zones F3 and F4 was found to be different in the field than shown on original zone map used to select transect locations in the office. Distance along baseline for Transect F3-2 was adjusted in the field from 270 ft to 220 ft to avoid overlap of the transect into management zone F4.

^c Baseline and offset distances for Transect F3-3 were adjusted in the field as described in notes (a) and (b) above.

^d Moved offset distance for Transect F4-3 to the north 12 feet from the random location designated in the office to the final offset location of 23 feet in order to keep it located within riparian vegetation, as described in note (a).

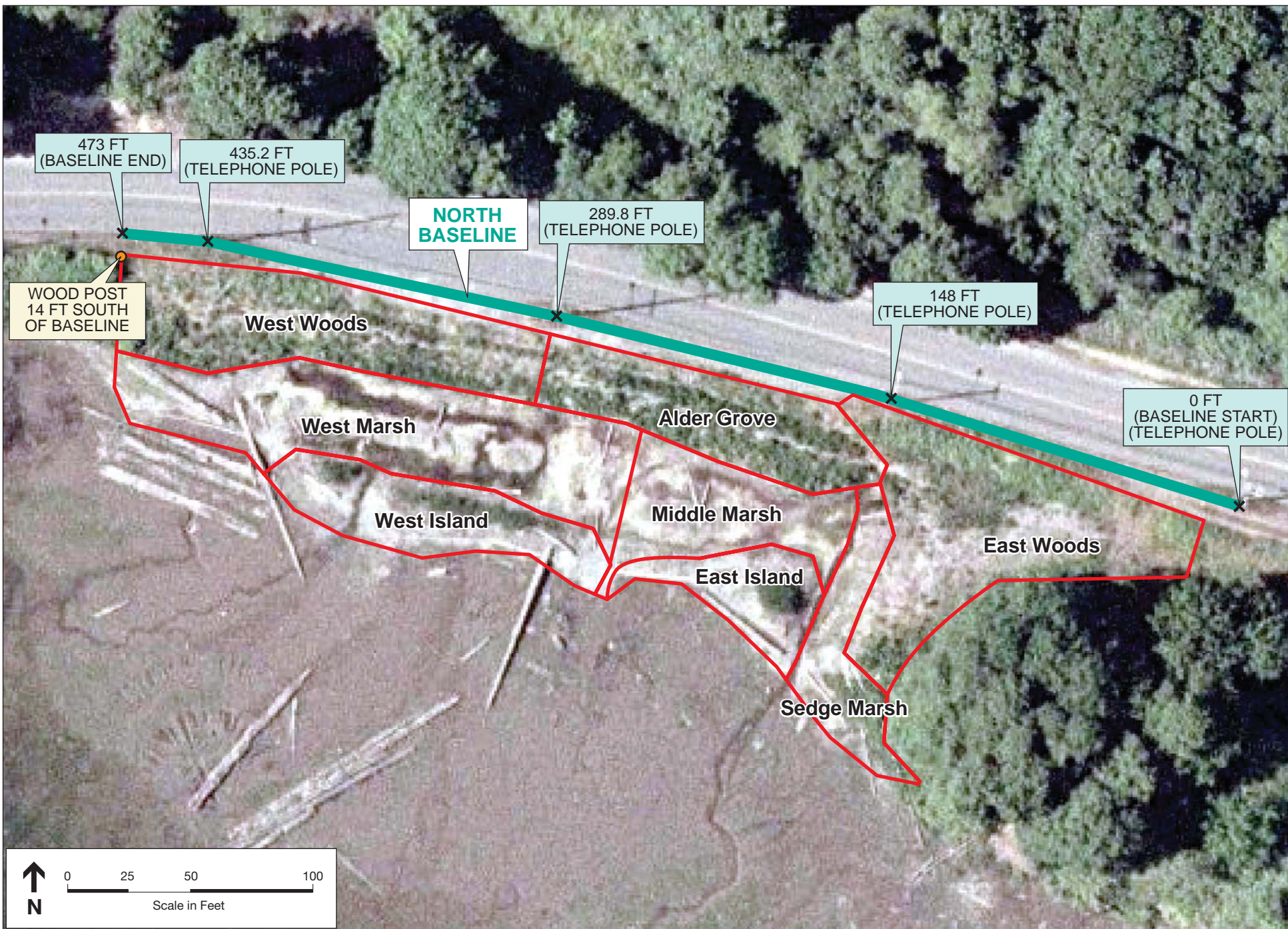
^e Moved offset distance for Transect F4-4 to the north 12 feet (final offset location of 12 feet) in order to avoid overlap with the relocated Transect F4-3 (see note (d)).

^f Moved offset distance for Transect F5-2 to the north 4 feet from the random location designated in the office to the final offset location of 31 feet in order to keep it located within riparian vegetation, as described in note (a).

^g Moved offset distance for Transect F5-3 from the random location designated in the office to the north by 25 feet, resulting in a final offset location of 18 feet. This was done both to keep the transect within the riparian vegetation as described in note (a), and to prevent overlap with the other two transects in management zone F5.

^h Moved offset distance for Transect F7-1 to the north 11 feet from the random location designated in the office to keep it within riparian vegetation, as described in note (a). The other two transects in this management zone (F7-2 and F7-3) were moved a corresponding 11 feet north to prevent transect overlap. The final offset locations used for these three transects were 19 feet, 10 feet, and 6 feet, respectively.

Squally Beach Management Zones and Riparian Transects



Riparian Baseline Location Information, Squally Beach

NORTH BASELINE (total length: 473 ft)	
General location: Runs roughly east to west along north side of riparian area.	
<i>Distance along baseline</i>	<i>Landmarks</i>
0 ft (start – east end of baseline)	First telephone pole after overhead lines cross roadway, after curve in road. Pole has several metal bands near base, marked at base with orange paint.
136 ft	Telephone pole guy wire.
148 ft	Second telephone pole.
154.1 ft	NE 3200 sign.
279 ft	Square cement post.
289.8 ft	Third telephone pole.
295.3 ft	Utility box.
435.2 ft	Fourth telephone pole.
473 ft (end – west end of baseline)	End of baseline; square wood post located approx. 14.2 ft south of baseline.
Comments:	Run tape just inside telephone poles (i.e., side nearest to riparian area).



Looking northwest from beginning of North Baseline, Squally Beach (9-1-06).



Looking southeast from approx. 300 ft along North Baseline, Squally Beach (9-1-06).



Looking southeast from end of North Baseline, Squally Beach (9-1-06).

Squally Beach Riparian Line Intercept Transect Locations

Total number line intercept transects: 12

Management Zone	Baseline Code	Line Intercept Transect Code	Distance along Baseline (ft)	Distance along Offset (ft)
East Woods	North	EW-1	38	36
		EW-2	45	24
		EW-3	94 ^a	45 ^a
		EW-4	115 ^a	40 ^a
Alder Grove	North	AG-1	160	7
		AG-2	187	29
		AG-3	206	19
West Woods	North	WW-1	298	21
		WW-2	317	29
		WW-3	318	13 ^b
		WW-4	346	22 ^c
		WW-5	370	34 ^d

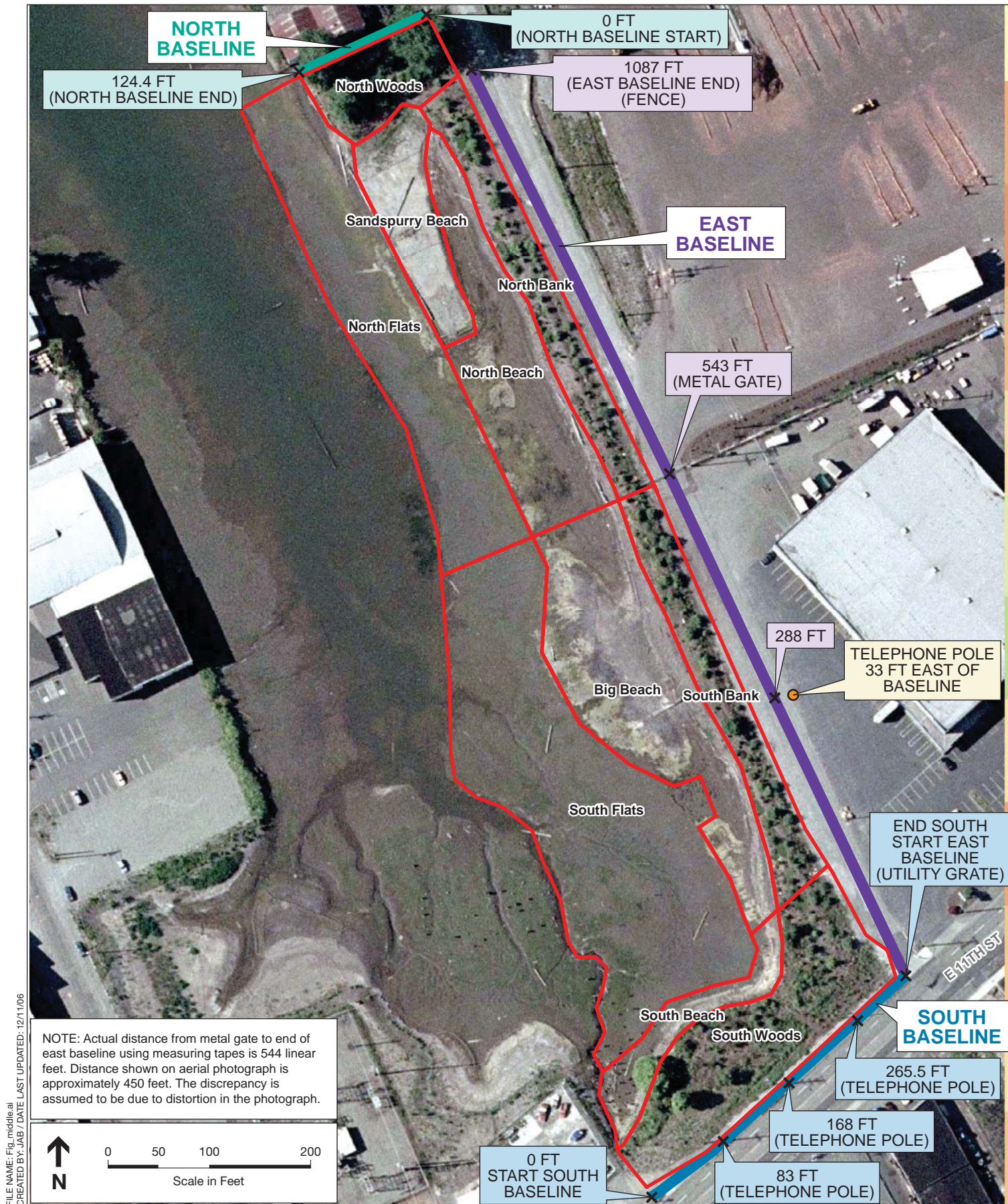
^a The locations of Transects EW-3 and EW-4 were adjusted in the field because management zone EW is less than 60 feet wide along this portion of the baseline. In order to allow sampling of this part of the management zone, these two transects were adjusted to be perpendicular rather than parallel to the baseline. The baseline and offset distances were located as for the other transects, but the 60-foot-long line intercept transect continued roughly south from the offset location rather than running west.

^b The random offset distance for Transect WW-3 designated in the office using aerial photos was found to be located within unvegetated gravel road right-of-way when measured in the field. The offset was moved to the south 7 feet to the final offset location of 13 feet in order to keep the transect located within riparian vegetation.

^c The random offset distance for Transect WW-4 was adjusted by 7 feet to the final offset location of 22 feet in order to avoid overlap with the relocated Transect WW-3 (see note (b)).

^d The random offset distance for Transect WW-5 designated in the office using aerial photos was found to be located within unvegetated gravel road right-of-way when measured in the field. A new random offset location was selected in the field, resulting in moving the offset to the south by 33 feet to the final offset location of 34 feet, in order to keep the transect located within riparian vegetation and avoid overlapping the other transects in this management zone.

Middle Waterway Management Zones and Riparian Transects



SOURCE: NOAA Restoration Center (Paul Cereghino), 2006.

Commencement Bay Habitat Restoration . 99013
**Middle Waterway (Simpson/Trustees) Riparian
 Baseline and Management Zones, 2006**
 Tacoma, Washington

Riparian Baseline Location Information, Middle Waterway

SOUTH BASELINE (total length: 335.5 ft)	
General location: Runs roughly west-east along south side of South Woods zone.	
<i>Distance along baseline</i>	<i>Landmarks</i>
0 ft (start – west end of baseline)	Start point located just west of railroad sign, where gravel parking lot meets asphalt/concrete driveway in front of Honda Marine. Marked asphalt at this point with orange spray paint during 2006 site visit.
44 ft	End of gravel area.
83 ft	First telephone pole.
113.5 ft	Concrete sidewalk begins.
168 ft	Second telephone pole.
169 ft	Utility box.
241 ft	Restoration area sign.
265.5 ft	Third telephone pole.
300 ft	Marked sidewalk with orange spray paint at this point during 2006 site visit.
303.5 ft	Sewer manhole.
321 ft	Railroad tracks.
335.5 ft (end – east end of baseline)	Southwest corner of rectangular metal utility cover within surface of East 11 th Street (south of stop sign).
Comments:	Baseline is located approx. 1.2 ft north of north edge of sidewalk along East 11 th Street.



Looking east from beginning of South Baseline, Middle Waterway (8-30-06).



Looking west from end of South Baseline, Middle Waterway (8-30-06).

EAST BASELINE (total length: 1,087.3 ft)	
General location: Runs roughly south-north along east side of South Woods, South Bank, and North Bank management zones.	
<i>Distance along baseline</i>	<i>Landmarks</i>
0 ft (start – south end of baseline)	Southwest corner of rectangular metal utility cover within surface of East 11 th Street (south of stop sign). Note: this is end point for the South Baseline.
11.5 ft	Stop sign.
21 – 23 ft	Baseline crosses curb here. Marked pavement with orange spray paint at 21.5 ft during 2006 site visit.
136 ft	Installed two pieces of rebar approx. 46.6 ft and 105 ft west of baseline to mark boundary between South Woods and South Bank management zones.
288 ft	Telephone pole is located approx. 33.3 ft east of baseline at this point.
300 ft	Marked black cottonwood tree west of baseline at this point with orange paint during 2006 site visit.
543 ft	Metal fence post on gate. Installed one piece of rebar approx. 26 ft west of baseline to mark boundary between South Bank and North Bank management zones.
567.5 ft	Existing truck route sign located approx. 3.8 ft east of baseline.
629.8 ft	Existing yield sign located approx. 6.7 ft east of baseline.
733.6 ft	Marked black cottonwood tree approx. 9.5 ft west of baseline with orange paint during 2006 site visit.
818 ft	Existing control lathe marked “20” located approx. 6.5 ft west of baseline.
1,087.3 ft (end – north end of transect)	Existing fence located south of utility shed. Installed one piece of rebar approx. 32 ft west of baseline to mark boundary between North Bank and North Woods management zones.
Comments:	Baseline transect runs north through gravel parking lot and gravel truck access road, approx. 20 feet east of vegetated riparian area.



Looking north from near beginning of East Baseline, Middle Waterway (8-30-06).



Looking south from metal fence at approx. 543 feet along East Baseline, Middle Waterway (8-30-06).



Looking north from approx. 555 ft along East Baseline, Middle Waterway (8-30-06).



Looking south from end of East Baseline, Middle Waterway (8-30-06).

NORTH BASELINE (total length: 124.4 ft)	
General location: Runs roughly east-west along north side of North Woods zone.	
<i>Distance along baseline</i>	<i>Landmarks</i>
0 ft (start – east end of baseline)	Installed rebar with orange cap approx. 19 ft north of large black cottonwood, 22.5 ft from NW corner of utility shed.
77.5 ft	Marked Sitka spruce located approx. 43 inches south of baseline with orange paint during 2006 site visit.
120.7 ft	Edge of existing metal plate/rock marker located approx. 12 inches south of baseline.
124.4 ft (end – west end of baseline)	Installed rebar with orange cap at baseline end.



Looking west from beginning of North Baseline, Middle Waterway (8-30-06).



Looking east from end of North Baseline, Middle Waterway (8-30-06).

Middle Waterway Riparian Line Intercept Transect Locations

Total number line intercept transects: 20

Management Zone	Baseline Code	Line Intercept Transect Code	Distance along Baseline (ft)	Distance along Offset (ft)
South Woods	South	SW-1	42	48
		SW-2	72	46
		SW-3	95	10
		SW-4	131	16
		SW-5	155	63
		SW-6	227	26
		SW-7	256	34
South Bank	East	SB-1	150	45 ^a
		SB-2	167	26 ^a
		SB-3	274	29 ^a
		SB-4	360	40 ^a
		SB-5	478	17
North Bank	East	NB-1	543	25 ^a
		NB-2	605	33 ^b
		NB-3	700	31
		NB-4	743	20
		NB-5	884	32 ^c
North Woods	North	NW-1	27	23
		NW-2	52	46
		NW-3	58	29

^a The random offset locations designated in the office using aerial photos for Transects SB-1 through SB-4 and NB-1 were found to be located within a gravel parking area when measured in the field. Each of these offset distances was moved 20 feet to the west to the final locations shown in the table above, so that the line intercept transects would be located within the vegetated riparian area.

^b Random offset distance selected for Transect NB-2 in the office was found to be west of the western edge of riparian vegetation (i.e., within the marsh) when measured in the field. Offset distance was moved 5 feet east to the final offset location of 33 feet in order to keep Transect NB-2 within the edge of the riparian area.

^c Random offset distance selected for Transect NB-5 in the office was found to be west of the western edge of riparian vegetation (i.e., within the marsh) when measured in the field. Offset distance was moved 7 feet east to the final offset location of 32 feet in order to keep Transect NB-5 within the edge of the riparian area.